A few cases were operated on after thirty hours, but usually to drain a fecal collection. Autopsy was performed in some 80 per cent. of the cases which ended fatally without operation having been attempted; hemorrhage was found as the commonest cause of death. Shock accounted for most of the deaths within the first twenty-four hours after operation. General peritonitis was rare in cases operated on not later than twelve hours after being wounded, but later than that it was present in about 50 per cent. of deaths. Gas gangrene, especially of the posterior abdominal wall, was the cause of death in at least 30 per cent. of the cases. After nephrectomy and splenectomy death from embolism and infarct occurred in a small percentage of cases. In about 8 per cent. of cases operated on wounds of other parts of the body caused death. Of the 500 cases 356 were operated on and 144 were not operated on. The following conclusions were drawn: wounds of the large vessels to the liver, kidney, and spleen are fatal before they can come to operation. Wounds involving the pancreas are seldom seen on the operating table, by reason, perhaps, of the contiguity of the organ to large vessels; only one case was seen. In that the foreign body was lodged in the tail of the pancreas. Anteroposterior wounds, especially in the epigastrium, are least dangerous, and wounds from side to side, especially low down, are dangerous. Wounds of solid viscera are not so dangerous as those of hollow viscera. Cases that come to operation with a herniated loop of bowel exposed do badly, especially if much bowel is lying exposed; the same is true when the stomach is partially herniated. Wounds of the stomach, colon and especially the small intestine, require exploration, but in a posterior wound involving the colon the greatest care should be taken not to convert a retroperitoneal condition into an intraperitoneal one. Wounds of the liver and kidney should be carefully determined as such only, and then treated expectantly, doing no more than exploring and cleaning up the track, and not that if probably a through and through wound produced by an undistorted rifle bullet or shrapnell ball. Avoid resection. End-to-end anastomosis is preferable to lateral when resection is essential. Wounds of the diaphragm are not necessarily fatal, nor even to be greatly feared. Careful repair gives excellent results. Multiple drainage tubes are rarely necessary, and always to be avoided if possible. Abdominal lavage is a dangerous practice. Never leave free, unprotected gauze in the abdomen. Paul's tube should be relegated to the museum, except in very rare cases. Speed in operating is essential, not only for the benefit of the patient, but because of the demands of scores of less vitally wounded men requiring attention during an active offensive. Resection for fecal fistula is better done late when the patient is in England.

Direct Transfusion of Blood, with a Description of a Simple Method.—Fullerton and Drever (*Lancet*, May 12, 1917, p. 715) say that treatment by direct transfusion of blood has attracted much attention of late during the course of the war, since benefit has been derived from it in many cases of hemorrhage and in certain cases of anemia secondary to sepsis. Lives have been saved when all other methods of resuscitation have failed. In many cases the effect has been immediate and dramatic. They have seen patients who were blanched and shocked and with pulse hardly perceptible brought back to life in a most astonishing way.

At the same time they do not recommend its indiscriminate use, and they have only resorted to it in cases which they considered desperate. Transfusion is effected from a small artery to a suitable vein. The apparatus used consists of two glass or silver cannulæ connected by a short length (about 7 inches) of India-rubber tubing, the whole being coated within and without by a thin layer of wax made by mixing hard and soft paraffin, in about equal parts. They use thin-walled, transparent, India-rubber tubing which will stand heat and which will allow pulsations to be easily felt during the operation. The cannulæ they have found most useful are made of silver with a bulbous end so as to ensure their retention in the vessels without the necessity of tying or holding them in. Glass cannulæ of similar size and shape may be used. The ends of these are bevelled by grinding on stone or brick to facilitate introduction. They have the advantage of being easily improvised in any ordinary clinical laboratory, but it is difficult to make a bulb of suitable size to fit tightly into the vessels, and they, therefore, require to be tied in or held—a most tiresome process. The dimensions of the cannulæ are as follows: Arterial cannula: length, 4 cm.; external diameter at point, 3 mm. The operation is done under local anæsthesia. The radial artery of the donor was found most suitable, and one of the veins of the elbow or the internal saphenous of the recipient. When the two vessels to be employed are exposed they are ligated at their distal ends and a light bull dog forceps is placed on the proximal end of each. A V-shaped incision is then made with sharp scissors into each vessel. The introduction of the cannula is facilitated by making the incision in the vessel close to the ligature and seizing the flap thus made at its extremity with a fine forceps. The opening is thus made to gape. An analysis of the 16 cases transfused by this method shows that 1 received no blood owing to an undetected obliteration of the receiving vein. In 3 the patients appeared beyond hope of recovery and transfusion was only undertaken as a last resort. Of the other 12 in which improvement might have been anticipated, 4 made rapid and very satisfactory progress, which is attributed, without hesitation, to transfusion. In another case the recovery was not attributed to the transfusion. The remaining 7 cases died although hopes of their recovery were entertained. The fact that improvement took place in most of the cases that died encourages the belief that under similar circumstances in future transfusion might just tide the patient over a critical period and allow time and opportunity for further surgical treatment. Three cases transfused by this method by two other surgeons gave excellent recoveries.

Influence of the Venous Collateral Circulation of the Kidney on Hydronephrosis. Barney (*Ann. Surg.*, 1917, lxv, 597) says that one of the earliest effects of sudden and complete obstruction of the ureter is the production of an intense hyperemia and œdema of the kidney. The intrarenal pressure slowly rises by damming back the urine which is being formed, and this in turn produces a slow but constant dilatation of the uriniferous tubules. This compresses the venous capillaries, especially those in the cortex, and serves to perpetuate the changes already started. At first only the venous capillaries are affected, but later the artificial circulation also becomes involved. If then the venous apparatus both in the fat capsule and on